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**R.I.T.**

**Behrdie**

**by Brendan T. Murphy**

A Thesis submitted in partial fulfillment of the requirements for the Degree of Master of Fine Arts in Industrial Design

Department of Design

College of Art and Design

Rochester Institute of Technology

Rochester, NY

November 27, 2018

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## **Abstract**

Humans are and always will be consumers. They have utilized goods to solve problems and explore creative ideas. As cultures evolved, new products came about with increasing complexities and functions. People began to consume products for their meaning rather than for the service the objects provided. Currently, products dominate human life, a culture of materialism driving incredible consumption rates. Excessive consumption creates problems for the environment and human well-being. Many strategies have been proposed to reduce the rapid accumulating of products, however, as they do not address consumers, but instead producers, lasting impact has yet to be found. A solution is needed that can bring awareness of consumption patterns to consumers. Behrdie is a designed service that reduces barriers to the activity of donating goods, making it a more viable disposal option. The service creates consumption consciousness by allowing customers to easily and frequently encounter the products they no longer use, providing reflection upon their consumption and disposal behaviors. This service can foster further solutions and begin to change the current materialistic reality of overconsumption.

## **Keywords**

**Conscious Consumption, Materialism, Overconsumption, Behrdie, Donation**

**Dedication**

My family, PMSCREKMA, for their support and inspiration surrounding this design.

## Introduction

Consumption has been dangerously woven into society. Humans have always lived and consumed in a material culture, from the things they eat to the tools they use. 40,000 years ago, simple objects like ostrich eggshell beads were made and traded to distinguish tribes from neighboring groups.<sup>1</sup> As years passed, creativity evolved, and products were made reflecting cultural nuances and innovations from competition among nations.<sup>2</sup> This growth in production and stylistic differentiation further emphasized objects as valuable, not just for their functional use, but for the meaning humans projected upon them. Goods, initially utilized to serve human needs began to take on different significances, often like items of worship, inspiring a sense of awe and wonder over an understanding of use.<sup>3</sup> This changing perception of goods accelerated during the 1950s, transitional years between modernism and postmodernism.<sup>4</sup> This decade is considered a time of change in style and design thinking. Products no longer needed to be durable, or even functional. They were valued for their meanings, as icons or symbols.<sup>5 6 7</sup>

In the United States, these transitional years coincide with the industrial boom that occurred following World War II. In those years, corporate leaders and economic strategists created actions to increase the economy's capacity to produce goods and services. Those adjustments, in methods of advertising, designing, and manufacturing, were aimed at increasing product demand and consumption, and popularized design tactics such as planned obsolescence and perceived obsolescence. These changes increasingly cycled resources and products through the Materials Economy<sup>8</sup>, the pathway of a resource through harvest, production, and disposal (fig. 1). This cycling, combined with the changing perception of a product not as a good to serve a need, but as a symbol of an idea, status, or fashion, applied increasing pressure on consumers to keep up with trends and developments, in all material categories, from large goods like housing, to smaller goods like shoes. The purpose of living and working became materialism, to consume as much as possible because of perceived necessity. To handle an increasing influx of goods, consumers responded with a desire for more space and income, to contain and purchase even more goods respectively. Fig. 2 demonstrates the enormous change in housing that has occurred over the past 40-50 years. A smaller, yet similar steady increase in work time (fig. 3) also exists. Today, Americans consume more than ever before, over two times as much as in 1950.<sup>9</sup> Estimates predict that the global middle class will grow to 4.9 billion people in 2030 (compared to the 1.8 billion back in 2009).<sup>10</sup> With minimal change, product demand and resulting consumption will also grow.

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<sup>1</sup> Chapman, *Emotionally Durable Design*, 58.

<sup>2</sup> Chapman, 59.

<sup>3</sup> Chapman, 59.

<sup>4</sup> Chapman, 59.

<sup>5</sup> Chapman, 59.

<sup>6</sup> Leonard, "The Story of Stuff", video.

<sup>7</sup> D'Avella, *Minimalism*, film.

<sup>8</sup> Leonard, "The Story of Stuff", video.

<sup>9</sup> Leonard, "The Story of Stuff", video.

Source: "Why Consumption Matters" by Betsy Taylor and Dave Tilford, in *The Consumer Society Reader* Edited by Juliet B Schor and Douglas Holt (2000), p. 467

<sup>10</sup> Rogers, "Product Longevity and Shared Ownership", Introduction. Source: Kharas H (2010) *The Emerging Middle Class In Developing Countries*, OECD Global Development Outlook, Working Paper No. 285.

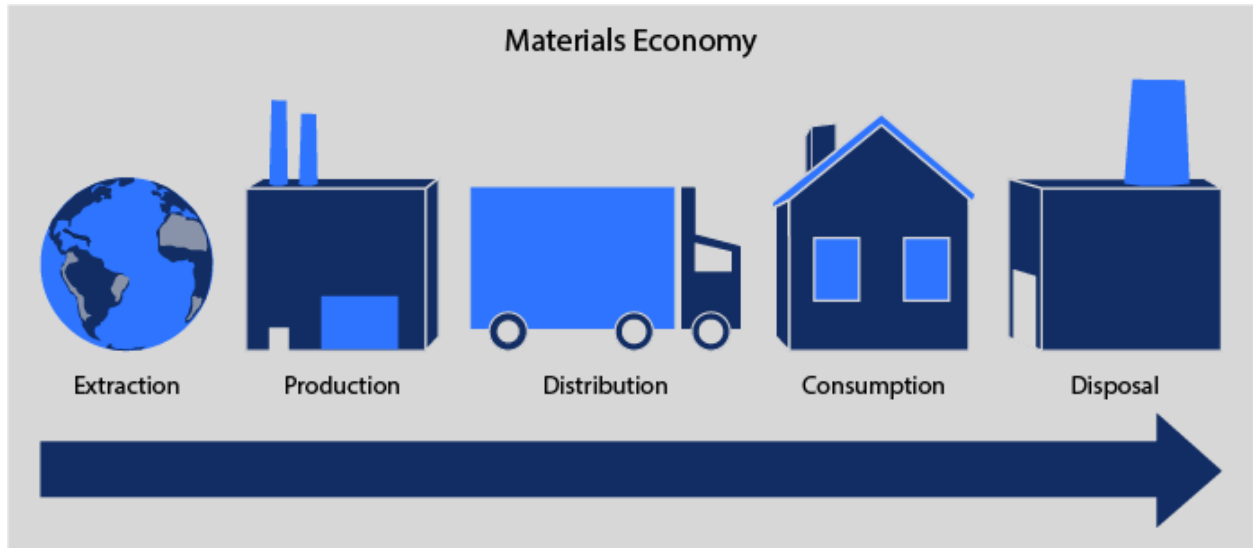


fig. 1 The Materials Economy: The standard path of goods from harvest to disposal

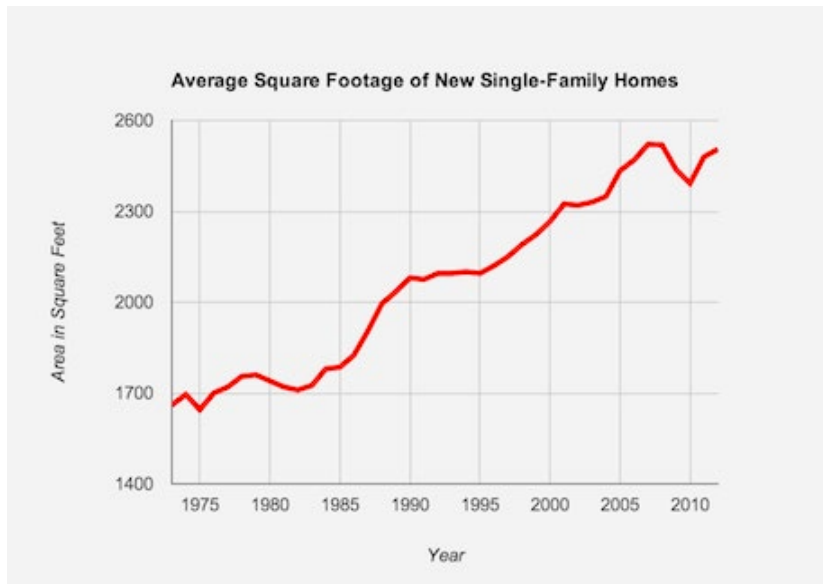


fig. 2 Increasing Average Square Footage of Homes

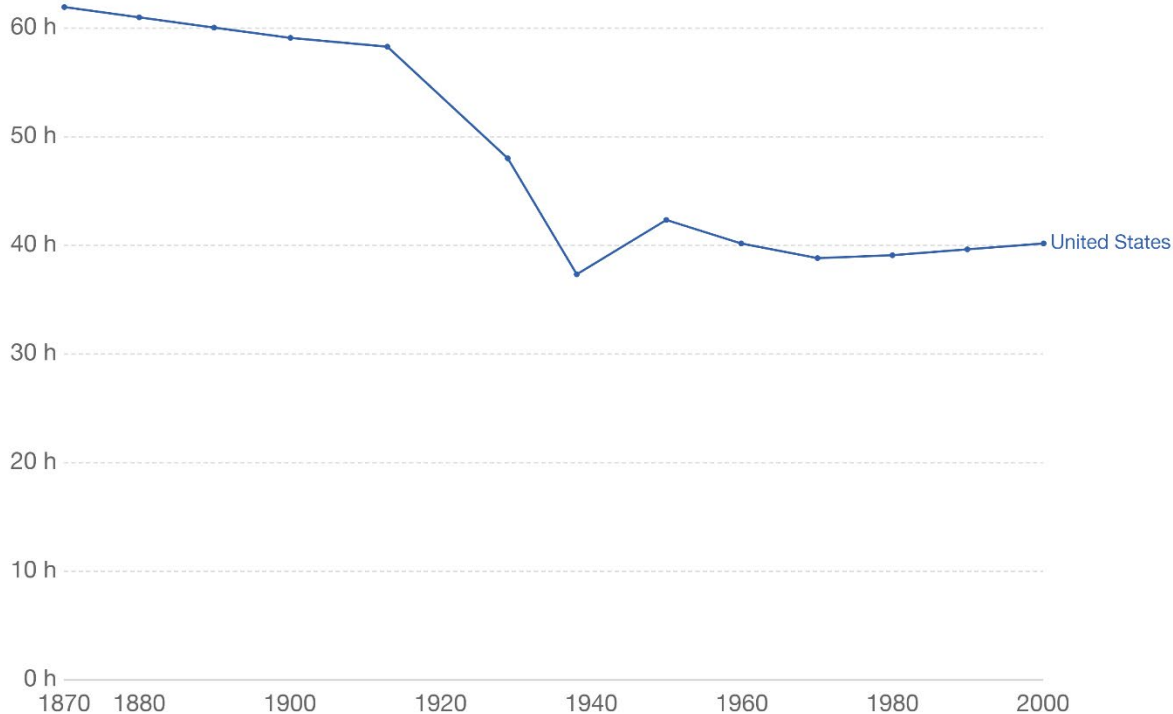
(credit: David Friedlander, Life Edited.

Source: <https://www.census.gov/construction/charts/pdf/medavgsqft.pdf> )



## Weekly Work Hours

Work hours of full-time production workers (male and female) in non-agricultural activities.



Source: Huberman & Minns (2007)

OurWorldInData.org/working-hours/ • CC BY-SA

fig. 3 Weekly Work Hours

(credit: Max Roser (2018) - "Working Hours". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/working-hours' [Online Resource], 2018.

Source: Michael Huberman, Chris Minns, "The times they are not changin': Days and hours of work in Old and New Worlds," 1870–2000, In *Explorations in Economic History*, Volume 44, Issue 4, Pages 538-567, 2007. <https://doi.org/10.1016/j.eeh.2007.03.002>. )

## Problem Area

What is wrong with the increasing level of consumption and product cycling in America? Humans are overconsuming products. They continuously take in more goods than they need. The real harm is found in the negative effects resulting from excessive intake. This thesis will briefly touch upon two problems: the environment and natural resources, and American living situations and relationships.

The earth is being harvested in an unsustainable way. The planet's natural resources are dwindling, and though some efforts have sought to bring awareness to this problem, little impact has been made. One cause for this consumption rate is the growing world population. However, research has shown that though the population is in fact growing, the resource utilization rate is increasing more quickly. "Over the last 50 years [1955-2005] the world population has increased 50 percent; but our resource utilization has increased by 1000 percent for the same period."<sup>11</sup> For clarification, it is worth noting that population is still important to consider in understanding the human utilization of resources, but it does not tell the whole story. Important resources such as oil, natural gas, phosphorus, coal, and fresh water are being drained, and without serious changes in production and consumption they will only continue to disappear more quickly.<sup>12</sup>

Waste management is also harming the environment. Toxic chemicals are introduced into the atmosphere and earth through products and processes that burn natural resources and disposal destinations like landfills and garbage incinerators. Incinerators are used to reduce waste volume, but they release harmful toxins directly into the atmosphere as a result.<sup>13</sup> Though work is being done to reduce emissions,<sup>14</sup> more is needed. Consider that a 'safe' concentration of CO<sub>2</sub> in earth's atmosphere is around 350 parts per million (ppm). The current concentration is exceeding 400 ppm for the first time in millions of years.<sup>15</sup> This growing concentration introduces environmental changes that will negatively impact habitable ecosystems for humans, plants, and animals. High CO<sub>2</sub> concentration is only one example of the environmental dangers stemming from the production of goods and energy, driven by current patterns of consumption.

Looking closer at the United States, some statistics illustrate the severity of the country's role in resource utilization and emissions creation.

- From 1970-2000, one third of the planet's natural resources base have been consumed.<sup>16</sup>
- The U.S. has 5% of the world's population but consumes 30% of the world's resources and creates 30% of the world's waste. If all nations consumed at U.S. rates, humans would need 3-5 planets.<sup>17</sup>

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<sup>11</sup> Chapman, *Emotionally Durable Design*, 3.

<sup>12</sup> Ritchie, "Energy Production & Changing Energy Sources" and "Water Access, Resources & Sanitation"

<sup>13</sup> Leonard, "The Story of Stuff", video.

<sup>14</sup> "Air Quality - National Summary." EPA.

<sup>15</sup> Ritchie, CO<sub>2</sub> Emissions, Online Resource.

Source: C. D. Keeling, S. C. Piper, R. B. Bacastow, M. Wahlen, T. P. Whorf, M. Heimann, and H. A. Meijer, Exchanges of atmospheric CO<sub>2</sub> and 13CO<sub>2</sub> with the terrestrial biosphere and oceans from 1978 to 2000. I. Global aspects, SIO Reference Series, No. 01-06, Scripps Institution of Oceanography, San Diego, 88 pages, 2001.

<sup>16</sup> Leonard, "The Story of Stuff", video.

Source: Paul Hawken, Amory Lovins and L. Hunter Lovins, *Natural Capitalism*, Little Brown and Company, (1999). Excerpted from page 4: "In the past three decades, one-th

<sup>17</sup> Leonard, "The Story of Stuff", video.

Source: "The U.S. produced approximately 33% of the world's waste with 4.6% of the world's population" (Miller 1998) quoted in *Global Environmental Issues* by Frances Harris (2004)

- The U.S. has less than 4% of its original forests left.<sup>18</sup>
- 40% of U.S. waterways have become undrinkable.<sup>19</sup>
- The U.S. industry admits to releasing over 4 billion pounds of toxic chemicals a year.<sup>20</sup>

Many people may assume that the primary victims of this ever-increasing consumption are ecologically related. However, the victims may in fact be humans themselves. Humans have grown accustomed to an environment and culture of consumption. They live in a reality where they are valued by the quality and quantity that they consume. As products became increasingly associated with symbols or beliefs, human value became connected to those products. Not only are people valued by their consumption, but humans assume that consumption is necessary for achieving happiness and comfort, thus consumption is directing their daily actions. This desire for products because of such perceived necessity is called materialism, and it is fed by an omnichannel marketplace<sup>21</sup> that encompasses the multiple marketing, buying, and selling channels of today's world. Products are cheaper and more available than ever before.<sup>22</sup> They are advertised and purchased in multiple analog and digital ways. In the past, consumers travelled to locations to purchase goods. Now, even calling on the phone or ordering online is becoming outdated. With devices like Amazon's Echo, a consumer can order items with a simple voice command.

Every day, advertisements tell consumers that what they have is inferior. People are surrounded with this messaging, and current generations have become accustomed to that since they were young. Children are indoctrinated into the culture of consumption by what they see and hear when they watch television shows, play video games, or simply browse the web. Advertisers target children to manipulate parents into purchasing more goods.<sup>23</sup> (Fig. 4) This advertising and consumption 'training' creates consuming teens and adults, and another harm appears, that of product related individuality and isolation.

Year	Marketing Dollars Targeting Children
1983	\$100 million
2006	\$17 billion

fig. 4 Increase in Marketing Dollars Targeting Children

<sup>18</sup> Leonard, "The Story of Stuff", video.

Source: Lester Brown, Michael Renner, Christopher Flavin, *Vital Signs 1998*, Worldwatch Institute, Washington, D.C. "Ninety five to ninety eight percent of forests in the continental United States have been logged at least once since settlement by Europeans." Also, see: "Can't See the Forest," by Josh Sevin, in *GRIST*, 1 March 2000. "1 to 2 percent of original forests in the U.S. remain undisturbed."

<sup>19</sup> Leonard, "The Story of Stuff", video.

Source: American Rivers, *Americas Most Endangered Rivers of 1998 Report*, Excerpt: "Today, 40 percent of our nation's rivers are unfishable, unswimmable, or undrinkable" Available at: [http://www.americanrivers.org/site/PageServer?pagename=AMR\\_content\\_e2a7](http://www.americanrivers.org/site/PageServer?pagename=AMR_content_e2a7)

<sup>20</sup> Leonard, "The Story of Stuff", video.

Source: "For Reporting Year 2005, 23,461 facilities reported to EPA's TRI Program. These facilities reported 4.34 billion pounds of on-site and off-site disposal or other releases of the almost 650 toxic chemicals." From: U.S. Environmental Protection Agency, *Toxics Release Inventory*, <http://www.epa.gov/tri/>

<sup>21</sup> Arnone, *Omnichannel marketplace*, 8-11.

<sup>22</sup> D'Avella, *Minimalism*, film.

<sup>23</sup> D'Avella, *Minimalism*, film.

Jonathon Chapman, in his book *Emotionally Durable Design*, says, “It is worth noting that ‘the history of consumerism shows that there is a relationship between changes in culture and changes in consumption patterns. It shows further that these changes move away from communal values toward individualism and materialism.’”<sup>24</sup>

People define individual identity by material things. “We learned to find refuge outside the species, in the silent embrace of manufactured objects”<sup>25</sup>. This fragments communal life and support systems like family and friends, creating loneliness. Perhaps evidence of this isolation can be seen in social media activity or digital dating applications, where communication often occurs with buttons and a screen. Researchers and historians recognize that humans feel empty and look to consumption to fill the void. They do not really want the product, they want what they think it will give them.<sup>26</sup> <sup>27</sup> Unfortunately, advertising and the cycle of consumption tell people that what they have is wrong and needs further replacement. This raises interesting questions that should merit further research, including examining the correlation between spiritual wellbeing and consumption patterns, and a closer analysis of emotional and mental illnesses and their relationship to consumption.

Human beings are living with more products in their homes than ever before.<sup>28</sup> In response, they have continued to purchase larger homes. However, studies have shown that these larger homes are not for the utilization of more space by the owner, but simply for increased storage capacity. These homes are also not for larger families. The average family size has been on the decline. In the year 1950, the average American household contained 3.37 people, and they lived in an average of 983 square feet. As of 2010, the average household size was only 2.53 members, though they lived in an average of 2,438 square feet, almost triple the size of the average 1950s home.<sup>29</sup> <sup>30</sup> <sup>31</sup> Interestingly though, a 2012 study showed that only 40% of a home’s square footage is used by residents. That 40% is equal to the size of a 1950s home. The remaining 60% is used for storage. In fact, as of 2012, 75% of home garages had no room to store a car.<sup>32</sup> <sup>33</sup> <sup>34</sup> Humans have not solved the problem of space with larger houses, they have only made it worse. This has created a personal storage industry with a capacity of 2.2 billion square feet.<sup>35</sup> Personal storage spaces could be thought of similarly to landfills. Both often hold perfectly good products that are not utilized. Landfills and storage take up a large quantity of space.

Free space is important. Human beings enjoy environments that have room to move about. Victor Papanek found that when given the choice of a spacious, clean, ‘beautiful’ room decorated with a few unique objects, test subjects reacted more favorably than when placed in an environment that was ‘average’ (clean but plain and grey like common

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<sup>24</sup> Chapman, *Emotionally Durable Design*, 60.

<sup>25</sup> Chapman, 61.

<sup>26</sup> Chapman, 60.

<sup>27</sup> D'Avella, *Minimalism*, film.

<sup>28</sup> D'Avella, *Minimalism*, film.

<sup>29</sup> D'Avella, *Minimalism*, film.

<sup>30</sup> Crook, Stuffed.

Source: Adler, Margot. "Behind the Ever-Expanding American Dream House." NPR. July 04, 2006. Accessed May 03, 2018. <https://www.npr.org/templates/story/story.php?storyId=5525283>.

<sup>32</sup> D'Avella, *Minimalism*, film.

<sup>33</sup> Crook, Stuffed.

Source: "The Stuff of Families." The Wall Street Journal. July 06, 2012. Accessed May 03, 2018. <https://www.wsj.com/articles/SB10001424052702304708604577504672437027392>.

<sup>35</sup> D'Avella, *Minimalism*, film.

work spaces) or ‘ugly’ (dirty, cluttered, and filled with trash and torn items).<sup>36</sup> From interviews performed throughout this thesis, it was found that many people understand that they live in cluttered spaces, but they do not know what to do about their situations, or they assume that they are going to eventually find space for everything. This thinking that more space can always be found is the kind that leads to further encroachments on active areas like yards, patios, and porches, because minimizing action is not taken.<sup>37</sup>

This thesis attempts to look more deeply at overconsumption and understand how to make consumers more conscious and thoughtful about consumption to engender a kind of awareness that can impact the way consumers acquire and producers create.

## Previous Solutions

Experts have proposed solutions to this cycle of excessive consumption. These solutions include several strategies, involving new ways of thinking and reimagining environmental, design, educational, and economic approaches. These solutions address the two main groups involved in the materials economy, the producers and the consumers, or the businesses and their customers. A third category, the disposal aspect of the materials economy will be ignored for now, not because it lacks importance, but because it is reactive to the waste made by producers and consumers.

One strategy from 2011, calls for a new kind of business model known as Embedded Sustainability, which looks to incorporate or ‘embed’ sustainability as a value throughout a business and its activities. It is,

The incorporation of environmental, health, and social value into the company’s core business with no trade-off in price or quality (i.e., with no social or green premium). The goal is not green or social responsibility for its own sake. It is meeting new market expectations in ways that strengthen the company’s current strategy or help it to develop a better one. At its best, it is invisible, similar to quality, yet still capable of hugely motivating employees and creating loyalty in consumers and supply chain partners.<sup>38</sup>

This approach is different than the practice of “bolting-on” sustainability to a company’s core strategy. Bolt-on sustainability companies often portray, “Green initiatives and social philanthropy that lie at the margins of the business, with symbolic wins that inadvertently highlights the unsustainability of the rest of their activities...A good tip-off that sustainability is bolted on is when it is declared to be a separate strategy...parallel to the company’s main business”.<sup>39</sup> (fig. 5 and 6) An initial reaction to this strategy could question its ability to be profitable. It is, but not because sustainability increases profitability in itself. It, “Forces companies to acquire constituent capabilities which in turn allow them to develop new competencies that lead to competitive as well as sustainability advantages.”<sup>40</sup>

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<sup>36</sup> Papanek, *The Green Imperative*, 76.

<sup>37</sup> Arnold, "Changing American Home Life", 36.

<sup>38</sup> Laszlo, *Embedded Sustainability*, 100.

<sup>39</sup> Laszlo, 103.

<sup>40</sup> Laszlo, 68.

## Bolt-on vs Embedded Sustainability

	Bolt-on sustainability	Embedded sustainability
Goal	Pursue shareholder value	Pursue sustainable value
Scope	Add symbolic wins at the margins	Transform core business activities
Customer	Offer "green" and "socially responsible" products at premium prices or with diminished quality	Offer "smarter" solutions with no trade-off in quality and no social or green premium
Value capture	Focus on risk mitigation and improved efficiencies	Reach across all seven levels of sustainable value creation
Value chain	Manage company's own activities	Manage across the product or service life cycle value chain

(Laszlo and Zhexembayeva, 2011)

fig. 5 Embedded Sustainability vs Bolt-on Sustainability

	Bolt-on sustainability	Embedded sustainability
Relationships	Leverage transactional relationship. Stakeholders such as customers, employees, and suppliers are resources to be managed and sources of input	Build transformative relationships. Co-develop solutions with all key stakeholders including NGOs and regulators to build system-level change
Competitor	Operate only in win-lose mode in which any gain is competitor's loss	Add cooperation with competitors as potential sources of gain
Organization	Create a "scapegoat" department of sustainability	Make sustainability everyone's job
Competencies	Focus on data analysis, planning, and project management skills	Add new competencies in design, inquiry, appreciation, and wholeness
Visibility	Make green and social responsibility highly visible and try to manage the resulting scepticism and confusion	Make sustainability performance largely invisible but capable of aligning and motivating everyone

(Laszlo and Zhexembayeva, 2011)

fig. 6 continued. (credit: Maddie Hickman. Source: Christopher Laszlo, *Embedded Sustainability*, .)

Another strategy looks to how goods are manufactured using Additive Manufacturing which encompasses production methods like 3D printing. This strategy focuses on “design quality” as a factor in improving product longevity, rather than focusing on, “Technicalities of lowering the environmental impacts of material, resource and energy use.”<sup>41</sup> Additive manufacturing is a useful solution because it allows manufacturers to better create the vision of designers. The need for a designer to compromise a design’s functionality or aesthetics because of manufacturing limitations is increasingly removed the more additive processes improve. This would eliminate the “one size fits all but is not ideal for anyone” problem due to manufacturing limitations. This strategy does come with some problems that would need to be resolved first. Experts say that designers would need to develop appropriate design methodologies and rules to incorporate both new features and new restrictions imposed by additive manufacturing.<sup>42</sup> It also raises questions about how unlimited customization could impact the consumer marketplace and consumer behavior. The assertion behind this suggestion is that products are losing the interest of consumers because they lose functional and aesthetic relevance, but is this the only reason? These are reasonable concerns to address as additive manufacturing develops.

Some solutions look to the way producers observe and entice consumers. As alluded to earlier, though businesses initially drove the increase in demand, consumers have contributed to increasing demand and product diversity through their choices and activities. Companies seriously consider the ‘needs’ of consumers to offer a product that they will feel attracted to. This is now commonly done by examining the data surrounding products and consumers.<sup>43</sup> Producers analyze customer feedback, buying patterns, and social trends, among several other factors to understand the consumer market. For example, companies understand that consumers have what is known as “limited attention,” and they use advertising techniques and strategies to focus consumer attention onto their products. “Firms strategically use high-end products to boost their customers' willingness to pay through a compromise effect.”<sup>44</sup> This is why many car dealers showcase high end car models in populated shop spaces or next to more affordable models. Consumers will be drawn to the features that are similar and feel enticed to buy. They will be persuaded to think that they are getting a good deal and feel that the affordable model almost compares to the high-end model. Interestingly, consumers only buy complex products when they feel they have no other option, which unfortunately occurs often, because businesses want to increasingly offer more to further promote a notion that complexity is progression. When shopping, “People buy complex product because their option is not to buy, and they don't want that even more than the complex product.”<sup>45</sup>

This notion of limited attention affirms that consumers do not really want complex products. They want things that are understandable and simple. The solution to this advertising tactic of exploiting consumers’ limited attention, posits that, “Optimal design reflects the extent to which customers consider a particular attribute (attribute allocation) and how a particular design changes this attention allocation.”<sup>46</sup> If companies give consumers what they want, which is a

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<sup>41</sup> Diegel, “Additive Manufacturing”, 69.

<sup>42</sup> Diegel, 73.

<sup>43</sup> Gmelin, “Achieving sustainable new product development”, 168-170.

<sup>44</sup> Dahremöller, “Limited Attention”, 438.

<sup>45</sup> Dahremöller, 438.

<sup>46</sup> Dahremöller, 438.

product that they can understand, the more satisfied customer will utilize the product fully for its intended use and, hopefully, its full intended life.

There are suggestions that improvements in consumption coming from product longevity can only come from truly understanding why consumers value product design, or if they really value it at all. It is recognized that they value understandable products, but what does that mean? Can it be broken down further? One author, Don Norman, addressed many aspects of consumer engagement with product design. Initially he asserted that consumers value a product's form and function (how things look and perform). However, he later changed this position to explain that consumers focus upon emotional qualities of products (how they make one feel).<sup>47</sup> <sup>48</sup> His analysis can help to understand why some seemingly ridiculous purchases, can have long lasting use for a buyer. Others since have tried to go further. One study proposed the "SAFE" valuation of products. (fig. 7) This acronym presents the four values that customers may recognize in products, whether they can perfectly articulate those values or not.<sup>50</sup> A product that successfully addresses these four values should obtain long lasting interest and use.

SAFE Valuation of Products	
<b>S</b>	<b>Social:</b> Social value in product design is defined as its ability to help consumers increase their perceived status in the community and/or improve their self-esteem.
<b>A</b>	<b>Altruistic:</b> Altruistic value in a product design is defined as the consumer's perception of how it enables them in helping other individuals and the society at large.
<b>F</b>	<b>Functional:</b> Functional value in a product's design is defined as the way it helps meet the practical or utilitarian needs of the consumer.
<b>E</b>	<b>Esthetic:</b> Esthetic value of the product design is defined as the consumer's perception of attractiveness and pleasure derived from its appearance.

fig. 7 SAFE Valuation

<sup>47</sup> Norman, *The Design of Everyday Things*.

<sup>48</sup> Norman, *Emotional Design*.

<sup>49</sup> Kumar, "Beyond Form and Function", 613-616.

<sup>50</sup> Kumar, 617-619.



All consumers can describe these four value themes, though the study found that some can articulate exactly what about a product's design creates that value better than others. Those capable of such detail are considered high design acumen consumers, where those less capable are considered low design acumen consumers.<sup>51</sup> The study suggested that businesses looking to design products of longevity need to consider such a difference in collecting data and consumer needs, for while a high design acumen consumer may articulate exactly what their need is, a low design acumen consumer may struggle to, or even incorrectly diagnose their need.<sup>52</sup> By improving the quality of information received from consumers, producers can provide desired, designed solutions.

## Connecting the Dots

The previously suggested solutions are good. They have real value and should be explored to create well designed, durable solutions. What is exciting is that they can all be considered together. None of these solutions are at odds with one another, they simply target different problem areas regarding product creation and consumption. This is a necessary step to take, to consider all these solutions together. Doing so reveals that they only drive toward a change in the way that products are created. There may be an impact upon consumer behaviors regarding how they use their products, but consumers' awareness of their accrument behaviors is not changed. These solutions may produce a well-designed watch that the consumer has lasting interest in. However, if still locked into the pattern or culture of consumption, that consumer will investigate alternatives and excess because that behavior has been habituated and is expected. It is also unrealistic to expect businesses to encourage conscious and sustainable consumption when many do not hold that behavior as a core belief of their models. Therefore, the consumer should be the focus of solutions, as they are capable of influencing businesses to change their producing strategies. Consumers need to become aware of their consumption behaviors to make beneficial changes for the environment and their own well-being.

## Donations and Thinking About Behavior

One solution for increasing product (and resource) longevity is the idea of product sharing, in this case, sharing unwanted products with others in need. Those in need may be individuals or larger organizations.<sup>53</sup> Regarding consumers, this solution is underexplored, although models for this already exist. The terms used in this case are often donation, thrift, second hand, hand me down, etc. These terms are slightly different than sharing, because they assume a full transfer from one user to another rather than common use. The fact that the same good is ultimately used by more than one person is constant though. The need for a newly produced redundant solution is replaced by an existing one, increasing the longevity of that product and turning it back into an object of use and service, rather than an object of prize or worship. However, though the notion of donating has been around for millennia, and significant donating organizations exist and sustain its usefulness, it seems an underutilized activity. Consider observations of human

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<sup>51</sup> Kumar, 617-619.

<sup>52</sup> Kumar, 617-619.

<sup>53</sup> Rogers, "Product Longevity and Shared Ownership", Abstract.

behavior in the United States. When consumers are finished with a product, they often look to two disposal methods: trash and recycling. These methods are clearly encouraged on the websites and advertisements of waste management companies. If a product is still functioning, some consumers struggle to decide how to remove it. They feel guilty in keeping a functioning product that they will not use, but also feel guilty throwing it out. Donating is seen as a chore to consumers, requiring collection, organization, delivery, and minor costs. Consumers will often throw away a usable product before they go through the process of donating it. Donating needs to be considered as a viable third option to garbage disposal and recycling.

Donating creates awareness. It makes consumers conscious of their buying behavior. When considering donation, a consumer must make a judgement, whether they want to dispose of the product or not. They must also determine the value that they believe that product could bring to another user; they must document a monetary value. Finally, they must reflect upon why they bought the product, and if they will need such a product again. Each of these contemplations allows a consumer to recognize their participation or non-participation in the cycle of consumption. However, because donating is such an underutilized activity, it needs to be elevated to a higher frequency of use.

## **Behrdie: A New Service**

To make donating a relevant and habitual alternative to current garbage and recycling removal, a new service must be created. The service will make donating preferable for customers by decreasing barriers of time, effort, and cost involved in collecting and transporting items to donation organizations. This service incentivizes consumers in several ways. At a competitive cost to that already associated with the donation process, the service will be requested and come to a customer's home for the pickup of unwanted goods. Customers may collect and organize items prior to pickup or allow the service to do everything upon arrival. Customers will be able to receive item valuation aid and analyze their donation activity through digital service features. Along with knowing that their unwanted goods will be utilized and distributed responsibly, customers will still receive a tax write-off as is done in current donation practices. The goods will be transported to the service's headquarters for inventorying before being moved to nonprofit and charitable partners. The partners will not have to pay for donations, as the cost is included in the pickup, organization, and distribution paid for by the customer. This will foster positive relationships between nonprofits, charities, and the service. Goods will be distributed based on need so that partners requiring the goods most will receive them first. The service will have a cost-driven structure so that pricing will be as affordable as possible. Details such as exact expenses and revenues are beyond the scope of this thesis where the service design is the focus.

By making this donation process significantly easier for customers, they will see it as a simple outlet for unwanted functioning products. They will utilize this service repeatedly, not only maintaining a clean-living environment, but also continuously remaining conscious of their product accruelement and releasing behaviors.

The company will utilize technology to streamline communication with customers and partners. Requests for pickup or distribution will be made and confirmed through phone, website, and application communication, and customers will be able to track when the pickup vehicle is approaching through the website and app. Utilizing the

potential of website and app technology, customer donating data may be securely recorded over the course of continued use, allowing users to easily process their product cycling patterns, giving analytical support to their understanding.

The service would be offered in multiple packages. It may be purchased as a one-time use, a three-month subscription, six-month subscription, or one-year subscription. Each package would also have two levels of service. One would be the standard service of arriving, picking up the items, and organizing them for distribution back at the central facility. The second would be a premium service, where a professional organizer would come in before the pickup, aid in decision making and clutter reduction, and finish by arranging the normal pickup of remaining items. The premium service would aid in covering the primary costs surrounding load transportation.

At this time the service will be called Behrdie (bâr-dē). This name may change but has been selected at this point because of its origin. It is a family nickname that evolved over time and through several iterations from the name Brendan. It signifies deep familial relationships from years of interaction and communication. This notion of a strong community and relationships is something that the service highlights through donation simplification and consumption awareness. This name frequently mispronounced as ‘birdy’ utilizes a bird in its logo and branding to reference the service’s recognition of sustainability in business and environmental efforts.

## **How it is Different**

The concept of a donation service is not new. There are numerous services in existence. Three of the biggest ones are The Salvation Army, Goodwill, and Give Back Box. There are many ways that Behrdie differs from these entities to create a strong reliable service promoting donations and conscious consumption. This thesis will address the differences in relation to these three services.

The Salvation Army is a not-for-profit social welfare organization that gives numerous kinds of aid to those in need. They have a donation program that involves not only a drop off option, but also a free pickup option. There are limitations to what kinds of products may be donated but they can move a wide variety of items. The Salvation Army is concerned about those they seek to help, and so prioritize less attention upon consumers whom they receive donations from. Behrdie seeks to help those in need by providing donations to partners like The Salvation Army but is even more deeply concerned with connecting to and aiding those consumers they serve and receive donations from. By providing a service that encourages these habits of donating and considering their consumption, Behrdie can provide help to both parties.

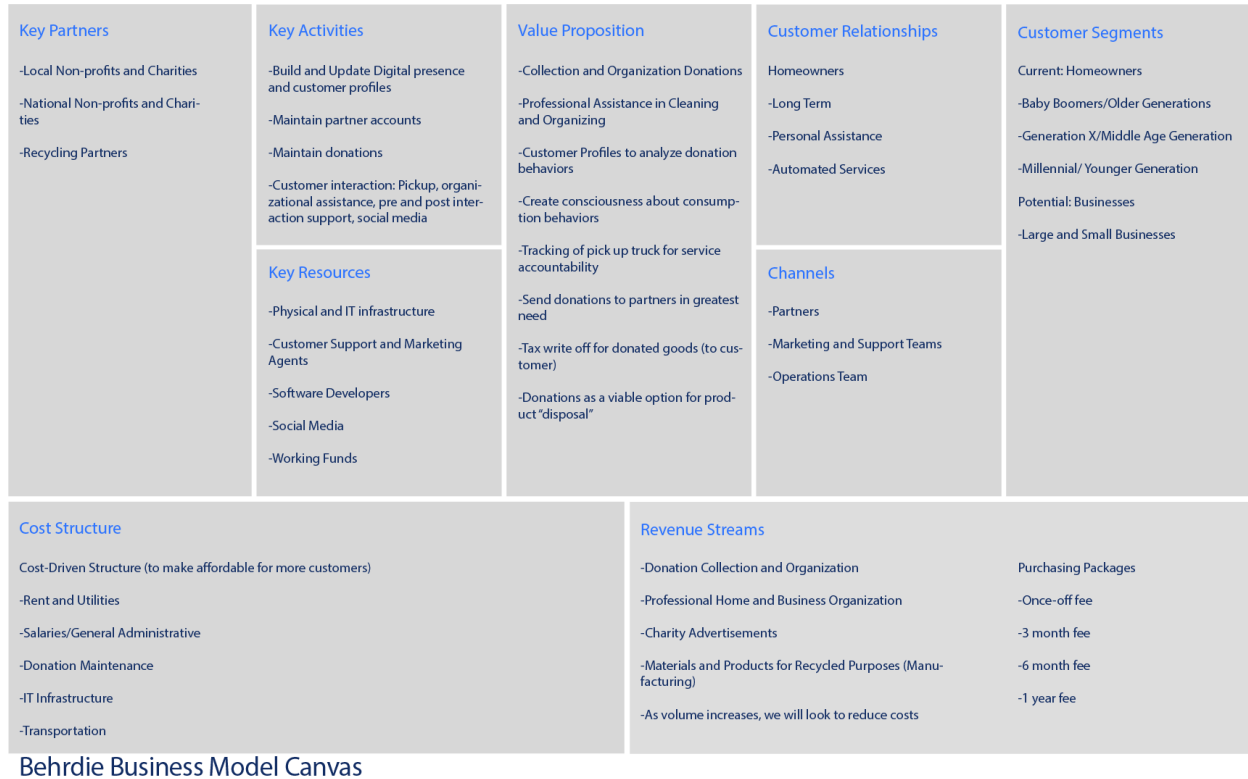
Goodwill is another nonprofit that utilizes donations in a similar way to The Salvation Army. They collect usable items to be sold or given to those in need. They, unlike The Salvation Army, do not have a pickup service, but have small Goodwill donation bins positioned around their local communities, making it easier for people to donate without having to go to the main stores or headquarters. Behrdie removes this whole process of collecting and packaging items to then bring to a facility; the service does that for consumers. This reduces numerous unnecessary channels between the consumer donating and the service collecting. In addition, just as Behrdie can more closely aid the giving person compared to The Salvation Army, the same is true regarding Goodwill. Encouraging consumers to donate

multiple times and understand their patterns as a consumer and donator is vital to changing the cycle of the materials economy.

Give Back Box, a company utilized by businesses such as Amazon, Levi's, and Newegg, (among others) can create channels for businesses to reach consumers so that they can provide donations through the mail system to charitable organizations. This in many ways is like the work that Behrdie would be trying to accomplish. However, Give Back Box has limitations in only working through the mail. The created donation channel is restricted by the weight limitations set by different mail services. This means that only small items would be able to be donated. Behrdie would not have this issue through its 'boots on the ground' service. Behrdie would also be able to observe donated products to determine whether they are satisfactory before moving it through the service system. Behrdie would also have the potential to eventually provide a service like Give Back Box's, but as an addition to the greater abilities of its initial work. Lastly, Behrdie, through a physical presence restores some of the personal touch found in analog business transactions. Excessive consumption breeds isolation, so a company looking to aid in reducing that effort, should not work isolated from its customers.

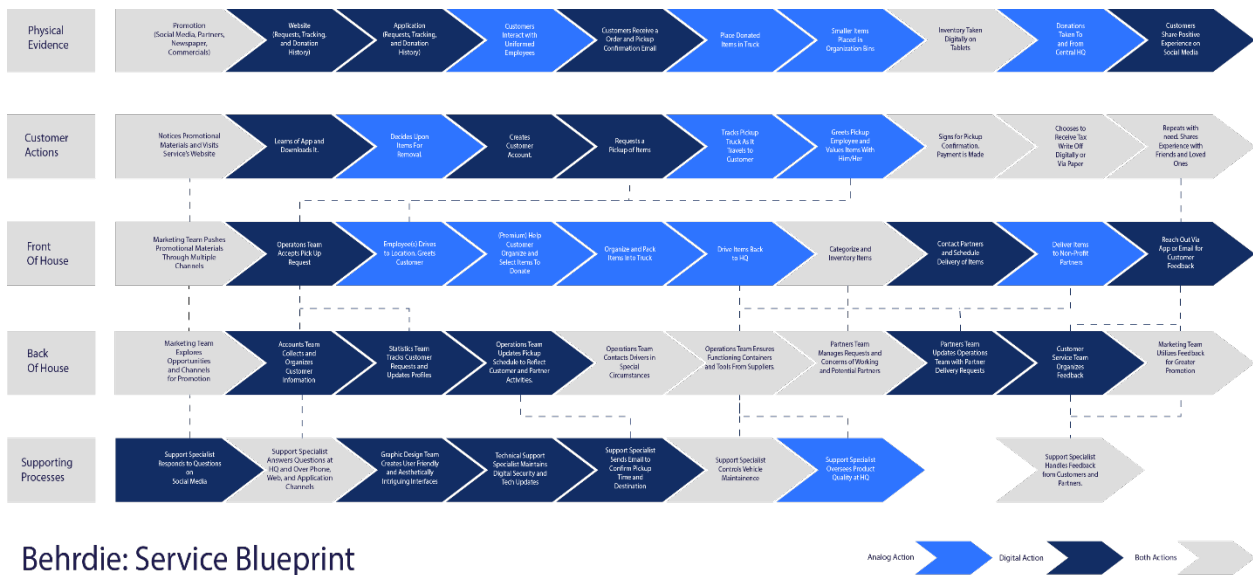
In summary, Behrdie looks to encompass and improve what many companies are trying to do. Behrdie can maintain a relationship with customers, and build consumer consciousness, all while providing help to not just one entity of need, but several.

## **Deliverables**



### Behrdie Business Model Canvas

fig. 8 : The Behrdie Business Model Canvas. This early canvas summarizes the key aspects and goals of Behrdie's business model.



### Behrdie: Service Blueprint

fig. 9 The Behrdie Service Blueprint. This blueprint showcases key players and interactions involved in the service's execution.

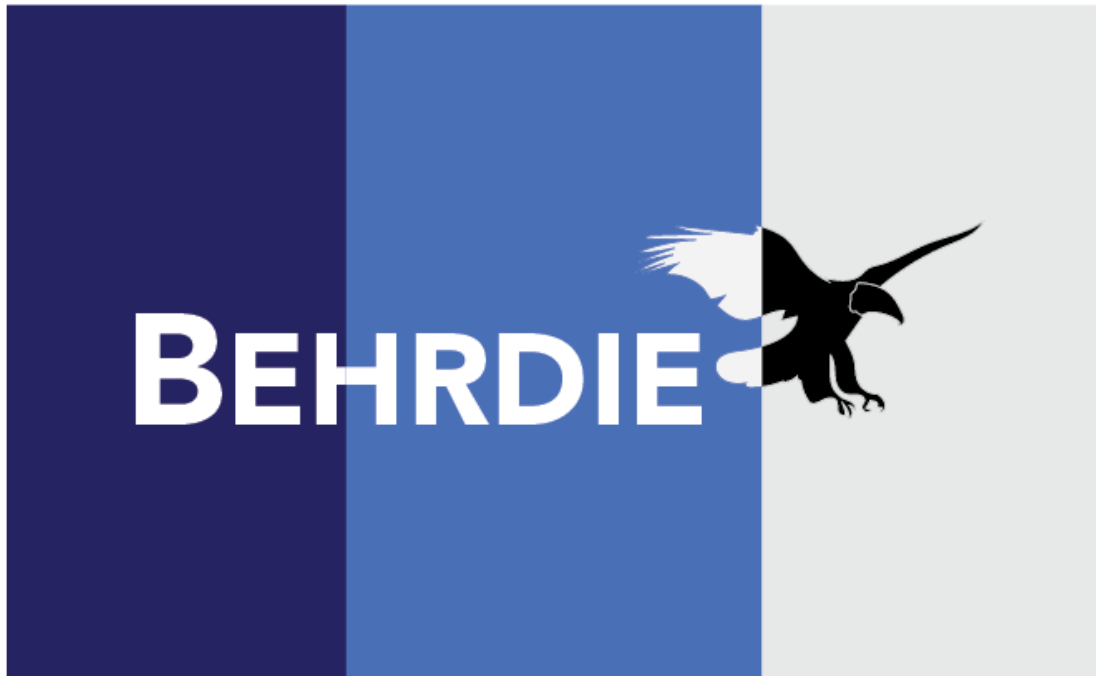


fig. 10 Sample Behrdie Logo. This image indicates the potential colors and logo that would be used in the branding of the service.

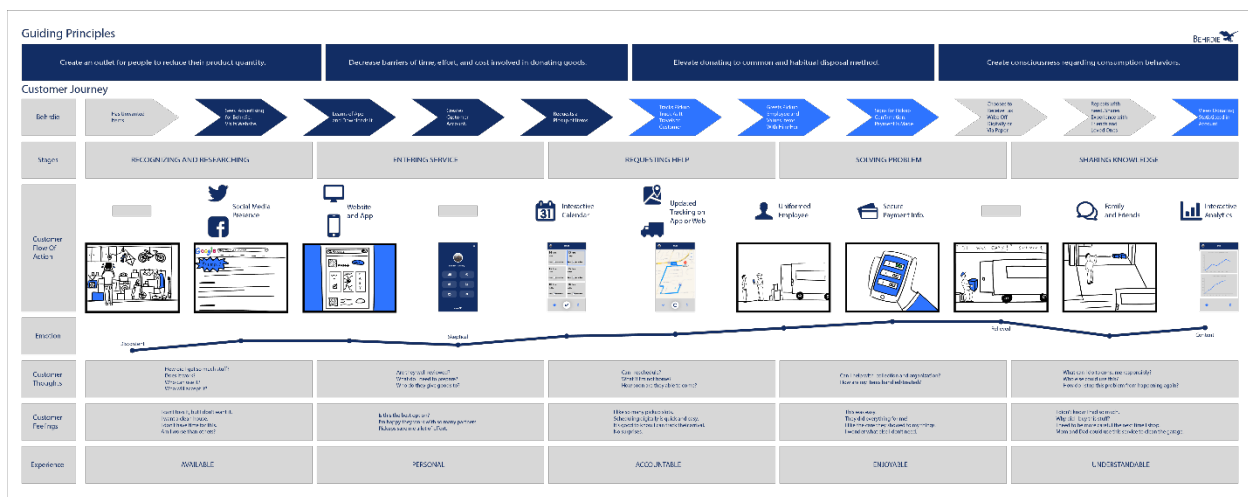


fig. 11 Sample Customer Journey Map. This graphic illustrates a customer's path from problem to solution, accompanied with service principles, customer emotions, and the steps of the service and customer interactions.

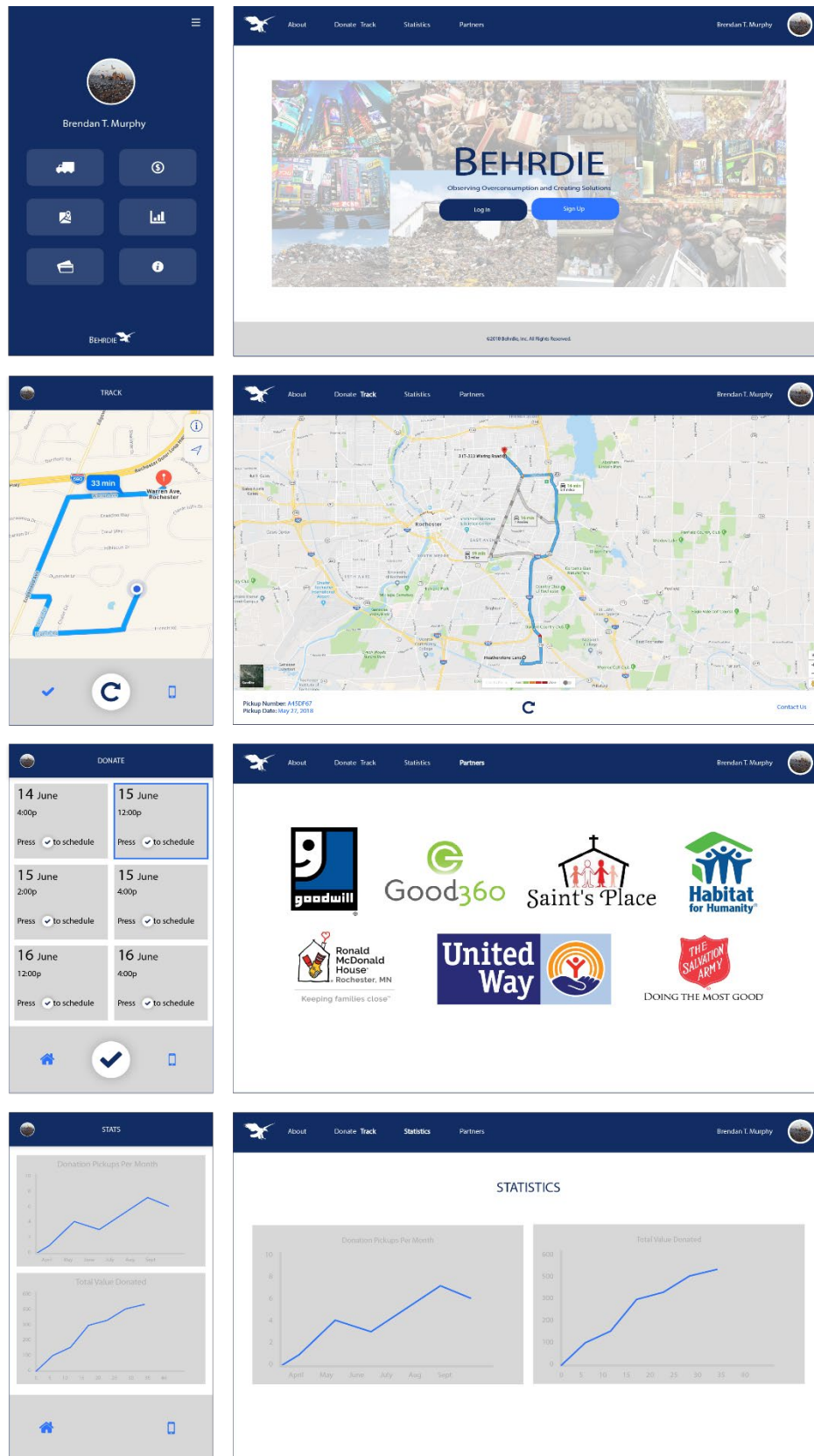


fig. 12 Sample Wireframes. These wireframes demonstrate the services visual style and some of the versatility of the digital tools.

## Scalability and Potential

Behrdie will be a service with potential for growth and scaling. There are several potential opportunities through which the service could continue to spread and influence consumers. These opportunities are through new partners. One would be through a partnership with a mail and package delivery service such as UPS, FedEx, or USPS. Consumers upon expecting a package, could alert their local delivery person of an item for donation. These delivery trucks could pick up small donations and bring them to the Behrdie facility, creating a new channel for donating. Disposal companies such as Waste Management could perform a similar task when picking up garbage or recycling each week. A third partnership that could become extremely fruitful could be with an organization such as Uber, which revolutionized transportation with a unique business model that utilizes the carpooling system to transport people through cars already driving about on the roads. Rather than a delivery truck, a secure system could be conceived through which a reputable 'stranger' could make a pickup and deliver goods to Behrdie.

Another exciting way in which Behrdie could increase its sustainability profile is partner with recyclers working with large manufacturers. There are times when goods will not be accepted as donations by non-profits, because they are outdated or not up to the non-profits functioning standards. In those instances, goods such as consumer electronics can be packaged and provided to recycling agencies that may utilize the parts for future goods. This could become another source of income to ensure stability for the service, or at the very least, further enhance the goal for as little waste as possible.

## Conclusion

The current cycle of consumption is problematic and connected to environmental and social issues. A reality of materialism feeds this cycle and it only accelerates with the growing omnichannel marketplace and growth driven business approaches. Many solutions have been and will be proposed to improve product design or business strategies in durable and sustainable ways, but they will not have an impact on consumers until an awareness is created surrounding the problems of materialism and excessive consumption. A service like Behrdie can create such an awareness by improving and elevating the activity of donating to a viable, repeatable removal outlet for unwanted goods. This thoughtful encounter with products found in the donation process makes consumers stop and think about their consumption patterns and provides perspective regarding material goods as objects of service over meaning. This contemplation or consciousness is crucial to changing current accrument behaviors, and other solutions need to be suggested and explored that will echo Behrdie's mission to heighten such thought. Consumption is necessary for problem solving but requires moderation so that negative side effects may be avoided. Alongside this continuing search for other additional consumer targeted solutions, research must continue in the problem domains affected by consumption. Increased understanding of such effects will create knowledge that can improve consumer decision making and product usage.



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